

Work Order ID 68109

Wednesday, April 06, 2011 2:28:42 PM



Page 1

Item ID: D3488-042

Accept



Setup Start



Revision ID:

Stop



Item Name: Blade Fitting Assembly, RH

Start Date: 4/6/2011 Start Qty: 12.00



Cust Item ID:

Required Date: 4/13/2011 Req'd Qty: 12.00



Customer:

Reference:

Approvals:

Process Plan:

[Signature]

Date:

11-04-14

Tooling:

Date:

QC:

Date:

SPC (Y/N):

Date:

Run Start



Stop



Sequence ID/
Work Center ID

Operation
Description

Set Up/
Run Hours

Tool ID

Tool #

Plan
Code

Accept
Qty

Reject
Qty

Reject.
Number

Insp.
Stamp

Draw Nbr

Revision Nbr

D3488

Rev B

100

0.00



DOOSAN LATHE

Doosan

Memo

0.00

Doosan Lathe

1-Turn as per Dwg DSK 101 & Folio FA627□2-Debur

al 11.4.25

12 0

110

0.00



QC2- Inspect parts off machine FAI/FAIB

QC

Memo

0.00

Quality Control

al 11.4.25

12 0

120

0.00



HAAS CNC VERTICAL MACHINING #1

HAAS 1

Memo

0.00

HAAS CNC vertical machine #1

1-Machine as per Folio FA627 & Dwg D3488□2-Debur

SL 11/65/04

12 0

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Work Order ID 68109

Wednesday, April 06, 2011 2:28:42 PM



Page 2

Item ID: D3488-042

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Setup Start



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Stop



Item Name: Blade Fitting Assembly, RH

Start Date: 4/6/2011 Start Qty: 12.00



Cust Item ID:

Required Date: 4/13/2011 Req'd Qty: 12.00



Customer:

Reference:

Approvals:

Process Plan:

Date:

Tooling:

Date:

Run Start



QC:

Date:

SPC (Y/N):

Date:

Stop

Sequence ID/
Work Center IDOperation
DescriptionSet Up/
Run Hours

Tool ID

Tool #

Plan
CodeAccept
QtyReject
QtyReject
NumberInsp.
Stamp

130

QC2- Inspect parts off machine FAI/FAIB

0.00

J 11/05/04

12

0



QC

Memo

0.00

Quality Control

140

QC8- Inspect parts - second check

0.00

H.A 11/05/04

12

0



QC

Memo

0.00

Quality Control

150

Chemical Conversion Coat per QSI005 4.1

0.00

12

BL

11-5-12



HandFinish

Memo

0.00

Hand Finishing

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

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NOTE: Date & initial all entries

1. The first step in the process is to identify the problem or issue that needs to be addressed. This involves gathering information and understanding the context of the problem.

2. Once the problem is identified, the next step is to define the objectives and goals of the project. This helps to clarify what needs to be achieved and provides a clear direction for the team.

3. The third step is to develop a plan or strategy to address the problem. This involves breaking down the problem into smaller, manageable tasks and determining the resources needed to complete each task.

4. The fourth step is to implement the plan. This involves putting the strategy into action and monitoring progress regularly to ensure that the project is on track.

5. Finally, the fifth step is to evaluate the results of the project. This involves assessing the outcomes against the objectives and goals and identifying any areas for improvement or further action.

Page 3



Stop

[illegible]**Cust Item ID:****Customer:**

Run Start

(b) (7)(C), (b) (7)(D)

Stop

QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

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**Insp.
Stamp**

0.00

[illegible]

Powdercoat

Memo

0.00

Powder Coating

START TIME:

☐OVEN TEMPERATURE:

Memo
START TIME: 9:30
320 015 FINISH TIME:

~~10-00~~

12x \emptyset m-~~k~~ 11/05/16

0,00

Abstract

QC

Memo

0.00

Quality Control

12 BL 11-5-16.

0.00

[illegible]

HandFinish

Memo

0.00

Hand Finishing

✓ Install Inserts as per Dwg D3488

12 of 11/12

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Work Order ID 68109

Wednesday, April 06, 2011 2:28:42 PM

Page 4

Item ID: D3488-042

Accept

Setup Start

Revision ID:

Stop

Item Name: Blade Fitting Assembly, RH

Start Date: 4/6/2011 Start Qty: 12.00

Cust Item ID:

Required Date: 4/13/2011 Req'd Qty: 12.00

Customer:

Reference:

Approvals:

Process Plan:

Date:

Tooling:

Date:

Run Start

QC:

Date:

SPC (Y/N):

Date:

Stop

Sequence ID/
Work Center IDOperation
DescriptionSet Up/
Run Hours

Tool ID

Tool #

Plan
CodeAccept
QtyReject
QtyReject
NumberInsp.
Stamp

190

QC5- Inspect part completeness to step on W/O

0.00



QC

Memo

0.00

Quality Control

200

Identify as per dwg & Stock Location: FP-8

0.00



Packaging

Memo

0.00

Packaging

210

QC21- Final Inspection - Work Order Release

0.00



QC

Memo

0.00

Quality Control

1212 4 11/5/1811/5/1811-05-17

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

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			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Picklist Print

Page 1

Wednesday, April 06, 2011 2:28:48 PM

Work Order ID: 68109

Parent Item: D3488-042

Parent Item Name: Blade Fitting Assembly, RH

Start Date: 4/6/2011

Required Date: 4/13/2011

Start Qty: 12.00

Required Qty: 12.00

Comments: IPP Rev:A New Issue 06-02-28 JLM
IPP Rev:B As per Rev B 06-03-30 JLM
IPP Rev:C Now On Doosan Lathe JLM Verified BY:DD

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
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ALS7-1032-225

Purchased

No

Each

700.0000

48



48 4/10/11

INSERT

Location

Loc Qty

Loc Code

ST282

700

100896

100

111529

300

111581

300

11110768

x48

D6103-003

Manufactured

No

Each

6.0000

12



12 4.5.11

Round Billet, Aluminum

Location

Loc Qty

Loc Code

MAT043

6

55430

3

65955

3

68173

(x12)

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

DART AEROSPACE LTD	Work Order:	<i>68109</i>
Description: Blade Fitting, RH / Turning Detail for D3488-1/-2	Part Number:	D3488-2
Inspection Dwg: D3488 / DSK101 Rev: B / D		Page 1 of 2

FIRST ARTICLE INSPECTION CHECKLIST

☒ **First Article**

 ☐ **Prototype**

Drawing Dimension	Tolerance	Actual Dimension	Accept	Reject	Method of Inspection	Comments
Lathe Section						
Ø2.150	+/-0.005	<i>2.145</i>	<i>✓</i>		<i>RR .02</i>	
Ø2.780	+/-0.005	<i>2.780</i>	<i>✓</i>		<i>411.</i>	
Ø3.125	+/-0.010	<i>3.125</i>	<i>✓</i>			
Ø3.346	+/-0.010	<i>3.347</i>	<i>✓</i>			
0.125 x 45°	+/-0.010 x +/-0.1°	<i>.125 x 45°</i>	<i>✓</i>			
8.000	+0.030/-0.000	<i>8.015</i>	<i>✓</i>			
9.250	+/-0.010	<i>9.250</i>	<i>✓</i>			
0.188	+/-0.010	<i>.188</i>	<i>✓</i>			
R0.032	+/-0.010	<i>R.032</i>	<i>✓</i>			
R0.062	+/-0.010	<i>R.062</i>	<i>✓</i>			
Ø0.297	+0.005/-0.001	<i>.298</i>	<i>✓</i>			
Ø0.430	+/-0.010	<i>.430</i>	<i>✓</i>			
0.100	+/-0.010	<i>.100</i>	<i>✓</i>			
0.125	+/-0.010	<i>.128</i>	<i>✓</i>			
2.620	+/-0.010	<i>2.620</i>	<i>✓</i>			
3.500	+/-0.010	<i>3.500</i>	<i>✓</i>			
1.005	+/-0.010	<i>1.005</i>	<i>✓</i>			
Ø0.484	+0.005/-0.001	<i>.484</i>	<i>✓</i>			
1.180	+/-0.010	<i>1.180</i>	<i>✓</i>			
3.150	+/-0.010	<i>3.150</i>	<i>✓</i>			
3.070	+/-0.010	<i>3.070</i>	<i>✓</i>			
R0.063	+/-0.010	<i>R.063</i>	<i>✓</i>			

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

DART AEROSPACE LTD		Work Order:	68109
Description: Blade Fitting, RH / Turning Detail for D3488-1/-2		Part Number:	D3488-2
Inspection Dwg: D3488 / DSK101 Rev: B / D		Page 2 of 2	

Drawing Dimension	Tolerance	Actual Dimension	Accept	Reject	Method of Inspection	Comments
Milling Section						
Ø0.508	+0.006/-0.001	.509	/		Hand L3	
0.750	+/-0.010	.751	/		H-G	
1.500	+/-0.010	1.500	/		"	
11.18	+/-0.030	11.183	/		H-G	
R0.062	+/-0.010	.062	/		R-G	
0.125	+/-0.010	.128	/		"	
0.590	+/-0.010	.590	/		H-G	
0.793	+/-0.010	.796	/		H-G	
1.351	+/-0.010	1.347	/		"	
1.317	+/-0.010	1.316	/		"	
1.802	+/-0.010	1.806	/		H-G	

Measured by: <i>[Signature]</i>	Audited by: <i>[Signature]</i>	Prototype Approval:	N/A
Date: 11/4/25	Date: 11/05/04	Date:	N/A

Rev	Date	Change	Revised by	Approved
A	06.03.31	New Issue	KJ/JLM	
B	08.09.19	Reformat P/O D3488-042	KJ/JLM	
C	08.12.02	Dimension 8.000 removed	KJ/JLM	<i>[Signature]</i>

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

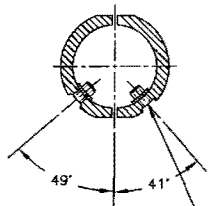
NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

SHOP COPY
RETURN TO
ENGINEERING

UNCONTROLLED COPY
SUBJECT TO AMENDMENT
WITHOUT NOTICE
WORK ORDER
NO. 68109

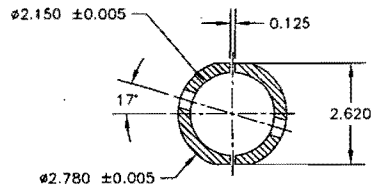
811-04-4



SECTION B-B

Ø0.297
C'BORE Ø0.430 x 0.100
INSTALL ALS4-1032-225 (OR AKS4-1032-225
OR ALS7-1032-225 OR AKS7-1032-225)
INSERTS AFTER FINISH
(4 PLACES)

4



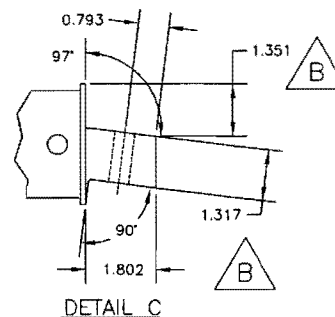
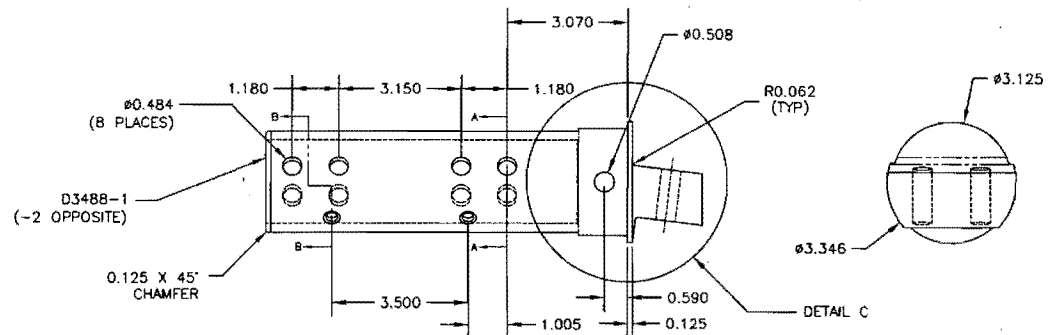
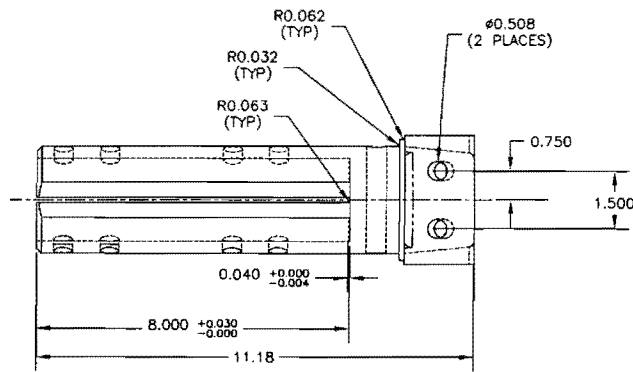
SECTION A-A

D3488-041/-042 BLADE FITTING ASSEMBLY PARTS LIST

QTY -041	QTY -042	PART NUMBER	DESCRIPTION
X		D3488-041	BLADE FITTING ASSEMBLY (LH)
	X	D3488-042	BLADE FITTING ASSEMBLY (RH)
1		D3488-1	BLADE FITTING (LH)
	1	D3488-2	BLADE FITTING (RH)
4	4	ALS4-1032-225 or AKS4-1032-225 or ALS7-1032-225 or AKS7-1032-225	INSERT

D3488-041/-042 BLADE FITTING

- MATERIAL: MAKE D3488-1/-2 FROM ALUMINUM 7075-T7351 ROUND BAR
PER QQ-A-225/9
(REF. DART MATERIAL SPEC M7075T73R)
- FINISH: ACID ETCH, ALODINE PER DART QSI 005 4.1
POWDER COAT WHITE (REF 4.3.5.1) PER DART QSI 005 4.3
- BREAK UNMARKED SHARP EDGES 0.010 TO 0.020
- INSTALL INSERTS AFTER POWDER COAT
- ALL DIMENSIONS ARE IN INCHES
- TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED



D3488-041 SHOWN (D3488-042 OPPOSITE)

RELEASED
06-03-15 PH
PER OS
EON #739

B	06.03.15	CHANGE THICKNESS
A	05.12.20	NEW ISSUE
DESIGN	PH	DRAWN BY PH
CHECKED	PH	APPROVED PH
DATE	06.03.15	TITLE
		BLADE FITTING
		DART DART AEROSPACE USA, INC. PORT WILMINGTON, WA
		DRAWING NO. D3488
		REV. B
		SHEET 1 OF 1
		SCALE 1:3

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DART AEROSPACE USA, INC.

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

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